

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

# PCT

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

<b>To:</b> <b>OKABE Masao</b>  <b>No. 602, Fuji</b> <b>Bldg., 2-3, Marunouchi</b> <b>3-chome, Chiyoda-ku, Tokyo</b>
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Date of mailing (day/month/year)	<b>08. 3. 2005</b>
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Applicant's or agent's file reference <b>10003824WO01</b>	<b>FOR FURTHER ACTION</b> See paragraph 2 below
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International application No. <b>PCT/JP2004/017331</b>	International filing date (day/month/year) <b>16.11.2004</b>	Priority date (day/month/year) <b>01.12.2003</b>
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International Patent Classification (IPC) or both national classification and IPC Int.Cl. <b>C09K11/06, H05B33/14</b>
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Applicant <b>CANON KABUSHIKI KAISHA</b>
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**1. This opinion contains indications relating to the following items:**

- ☒ **Box No. I**      Basis of the opinion
- ☐ **Box No. II**      Priority
- ☐ **Box No. III**      Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ **Box No. IV**      Lack of unity of invention
- ☒ **Box No. V**      Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ **Box No. VI**      Certain documents cited
- ☐ **Box No. VII**      Certain defects in the international application
- ☐ **Box No. VIII**      Certain observations on the international application

**2. FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

**3. For further details, see notes to Form PCT/ISA/220.**

Date of completion of this opinion <div style="text-align: center; font-weight: bold; font-size: 1.2em;">10.02.2004</div>	
Name and mailing address of the ISA/JP <div style="text-align: center; font-weight: bold;">Japan Patent Office</div> 3-4-3, Kasumigaseki, Chiyoda-ku, Tokyo 100-8915, Japan	Authorized officer <div style="text-align: center; font-weight: bold;">YOKO WATANABE</div> Telephone No. +81-3-3581-1101 Ext. 3483

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Box No. I Basis of the opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.  
☐ This opinion has been established on the basis of a translation from the original language into the following language \_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material  
☐ a sequence listing  
☐ table(s) related to the sequence listing
  - b. format of material  
☐ in written format  
☐ in computer readable form
  - c. time of filing/furnishing.  
☐ contained in the international application as filed.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

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Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	<u>1, 2, 3, 5, 6, 7, 8, 10-12</u>	YES
	Claims	<u>4, 9, 13</u>	NO
Inventive step (IS)	Claims	<u>3, 5, 7, 11</u>	YES
	Claims	<u>1, 2, 4, 6, 8-10, 12, 13</u>	NO
Industrial applicability (IA)	Claims	<u>1-13</u>	YES
	Claims		NO

2. Citations and explanations

D1: J.Chem.Soc., Dalton Trans., (1996), P.2889-2891  
D2: J.Chem.Soc., Dalton Trans., (1999), P.1455-1459  
D3: Inorganic Chemistry Commun., (2000), Vol.3, No.11, P.585-589  
D4: J.Am.Chem.Soc., (1987), Vol.109, No.14, P.4255-4260  
D5: Inorganica Chimica Acta, (1994), Vol.225, No.1-2, P.251-254  
D6: JP 63-264692 A  
D7: JP 2002-231454 A

(claim1)

The subject matter of claim 1 does not appear to involve an inventive step in view of the D1-6 cited in the ISR. D1-5 disclose some luminescent or fluorescent or phosphorescent materials having a structure represented by the formula(1). To use a luminescent or fluorescent or phosphorescent material as EL element layer(light-emitting layer)'s material were well-known in the technical field(see D6). Therefore, employing the luminescent or fluorescent or phosphorescent materials disclosed in D1-5 as light-emitting layer's material would have been easily conceived by the person skilled in the art.

(claim2,6,10)

The subject matter of claim 2,6 does not appear to involve an inventive step in view of the D1,2,6 cited in the ISR. D1,2 discloses some fluorescent or phosphorescent materials having a structure represented by the formula(2). To use a fluorescent or phosphorescent material as EL element layer(light-emitting layer)'s material were well-known in the technical field(see D6). Therefore, employing the fluorescent or phosphorescent materials disclosed in D1,2 as light-emitting layer's material would have been easily conceived by the person skilled in the art.

(claim3)

The subject matter of claim 3 is neither disclosed in any of the documents cited in the ISR nor obvious to a person skilled in the art.

(claim4)

The subject matter of claim 4 does not meet the requirement of novelty.  
D7 disclose a luminescent material a trinuclear metal coordination compound having a partial structure represented by the formula(4)(see claim,[0057]-[0067]).  
And D7 also disclose the metal is selected from the group consisting of

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Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of: ☒ Y

group 5 to 11 elements of the periodic table. So it disclose the metal involves Cu.

(claim5,7)

The subject matter of claim 5,7 is neither disclosed in any of the documents cited in the ISR nor obvious to a person skilled in the art.

(claim8)

The subject matter of claim 8 does not appear to involve an inventive step in view of the D1-6 cited in the ISR. There is a probability that the materials disclosed in D1-5 have the distance between Cu atoms equal or less than 3.2 angstrom.

(claim9)

The subject matter of claim 9 does not meet the requirement of novelty. There is a probability that the materials disclosed in D7 have the distance between metal atoms equal or less than 3.2 angstrom.

(claim11)

The subject matter of claim 11 is neither disclosed in any of the documents cited in the ISR nor obvious to a person skilled in the art.

(claim 12)

The subject matter of claim 12 does not appear to involve an inventive step in view of the D1-6 cited in the ISR. It is well-known that a luminescent layer contains a part of 100% of coordination compound.

(claim 13)

The subject matter of claim 13 does not meet the requirement of novelty in view of the D7. It is well-known that a luminescent layer contains a part of 100% of coordination compound.